

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

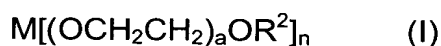
**LISTING OF CLAIMS:**

1. - 12. (Cancelled)

13. (Currently Amended) A textile substrate coated with a crosslinkable liquid silicone composition comprising a formulation of:

(A) at least one polyorganosiloxane (POS) resin containing, per molecule, at least two different siloxyl units selected from among those of M, D, T and Q types, one of said structural units being a T unit or a Q unit, and at least three hydrolyzable/condensable groups of OH and/or OR<sup>1</sup> types, in which R<sup>1</sup> is a linear or branched C<sub>1</sub> to C<sub>6</sub> alkyl radical;

(B) either (B-1), at least one metal alkoxide of general formula:



in which M is a metal selected from the group consisting of Ti, Zr, Ge, Si, Mn and Al; n = valency of M; the R<sup>2</sup> substituents, which may be identical or different, are each a linear or branched C<sub>1</sub> to C<sub>12</sub> alkyl radical; a represents zero, 1 or 2; with the provisos that, when the symbol a represents zero, the alkyl radical R<sup>2</sup> has from 2 to 12 carbon atoms and, when the symbol a represents 1 or 2, the alkyl radical R<sup>2</sup> has from 1 to 4 carbon atoms;

or (B-2), at least one metal polyalkoxide produced by the partial hydrolysis of the monomeric alkoxides of formula (I) indicated above in which the symbol  $R^2$  is as defined above with the symbol  $a$  representing zero;

or a combination of (B-1) and (B-2);

or (B-3) a combination of (B-1) and/or (B-2) with:

(B-3/1), at least one optionally alkoxyated organosilane containing, per molecule, at least one  $C_2$ - $C_6$  alkenyl group,

and/or (B-3/2), at least one organosilicon compound comprising at least one epoxy, amino, ureido, isocyanato and/or isocyanurate radical;

(C) either (C-1), at least one silane and/or at least one POS which is essentially linear and/or at least one POS resin, each of said organosilicon compounds containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from said AFs, wherein when the applicational functional group (UF) is different from said AFs, the applicational functional group(s) is a non-salified aminoalkyl, a fluorinated alkyl or a polyether;

or (C-2), at least one hydrocarbonaceous compound comprising at least one saturated or unsaturated, linear or branched hydrocarbonaceous radical and optionally one or more heteroatom(s) other than Si and existing in the form of a monomeric, oligomeric (linear, cyclic or branched) or polymeric (linear, cyclic or branched) structure, the said hydrocarbonaceous compound containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A)

and/or (B) and applicational functional group(s) (UF) which can be identical to or different from the AFs, wherein when the applicational functional group (UF) is different from the AFs, the applicational functional group is a fluorinated alkyl of formula  $R^{19}$ -OH in which  $R^{19}$  is a linear or branched aliphatic radical having 2 to 20 carbon atoms, said carbon atoms being substituted by at least one fluorine atom and optionally by at least one hydrogen atom; or a polyether of formula:  $R^{20}$ -[OCH<sub>2</sub>CH<sub>2</sub>]<sub>v</sub>-[OCH<sub>2</sub>CH(CH<sub>2</sub>)<sub>w</sub>]-OH wherein  $R^{20}$  is a linear or branched alkyl radical having from 1 to 4 carbon atoms and the symbols v and w are other than 0 and range from 5 to 30;

or a mixture of (C-1) and (C-2);

(D) optionally, a nonreactive additive system comprising:

(i) at least one organic solvent/diluent and/or at least one nonreactive organosilicon compound; (2i) and/or water, in the event of a liquid silicone formulation in aqueous dispersion or emulsion; and

(E) optionally, at least one auxiliary agent other than (D);

wherein constituent (A) comprises a mixture (A-3):

of at least one resin containing at least two different siloxyl units selected from among those of formulae  $(R^3)_3SiO_{0.5}$  (M unit),  $(R^3)_2SiO$  (D unit) and  $R^3SiO_{1.5}$  (T unit), at least one of said structural units being a T unit, with the proviso that the OH and/or OR<sup>1</sup> groups ~~may be~~ are borne by the M, D and/or T units and the content by weight of said OH and/or OR<sup>1</sup> groups ranging from 0.2% to 10% by weight, and

of at least one other resin containing at least two different siloxyl units selected from among those of formulae  $(R^3)_3SiO_{0.5}$  (M unit),  $(R^3)_2SiO$  (D unit),  $R^3SiO_{1.5}$  (T unit), and  $SiO_2$  (Q unit), at least one of said structural units being a Q

unit, with the proviso that said OH and/or OR<sup>1</sup> groups ~~may be~~ are borne by the M, D and/or T units and the content by weight of said OH and/or OR<sup>1</sup> groups ranging from 0.2% to 10% by weight; and further wherein the R<sup>3</sup> radicals comprising said resins being identical or different and selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl radicals which are linear or branched, C<sub>2</sub>-C<sub>4</sub> alkenyl radicals, the phenyl radical and the 3,3,3-trifluoropropyl radical.

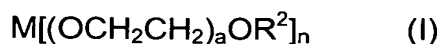
14. (Previously Presented) A textile substrate coated with the silicone composition as defined by Claim 13, but in cured state.

15. (Previously Presented) A textile substrate, the individual strands of which having a protective sheath therearound, said protective sheath comprising the silicone composition as defined by Claim 13, but in cured state.

16. (Currently Amended) A method for imparting softness, hydrophobicity, oleophobicity, hydrophilicity or antistatic properties to a textile substrate, the method comprising depositing thereon a thus effective amount of a silicone composition comprising a formulation of:

(A) at least one polyorganosiloxane (POS) resin containing, per molecule, at least two different siloxyl units selected from among those of M, D, T and Q ~~types~~, one of said structural units being a T unit or a Q unit, and at least three hydrolyzable/condensable groups of OH and/or OR<sup>1</sup> ~~types~~, in which R<sup>1</sup> is a linear or branched C<sub>1</sub> to C<sub>6</sub> alkyl radical;

(B) either (B-1), at least one metal alkoxide of general formula:



in which M is a metal selected from the group consisting of Ti, Zr, Ge, Si, Mn and Al; n = valency of M; the R<sup>2</sup> substituents, which may be identical or different, are each a linear or branched C<sub>1</sub> to C<sub>12</sub> alkyl radical; a represents zero, 1 or 2; with the provisos that, when the symbol a represents zero, the alkyl radical R<sup>2</sup> has from 2 to 12 carbon atoms and, when the symbol a represents 1 or 2, the alkyl radical R<sup>2</sup> has from 1 to 4 carbon atoms;

or (B-2), at least one metal polyalkoxide produced by the partial hydrolysis of the monomeric alkoxides of formula (I) indicated above in which the symbol R<sup>2</sup> is as defined above with the symbol a representing zero;

or a combination of (B-1) and (B-2);

or (B-3) a combination of (B-1) and/or (B-2) with:

(B-3/1), at least one optionally alkoxyated organosilane containing, per molecule, at least one C<sub>2</sub>-C<sub>6</sub> alkenyl group,

and/or (B-3/2), at least one organosilicon compound comprising at least one epoxy, amino, ureido, isocyanato and/or isocyanurate radical;

(C) either (C-1), at least one silane and/or at least one POS which is essentially linear and/or at least one POS resin, each of said organosilicon compounds containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from said AFs, wherein when the applicational

functional group (UF) is different from said AFs, the applicational functional group(s) is a non-salified aminoalkyl, a fluorinated alkyl or a polyether;

or (C-2), at least one hydrocarbonaceous compound comprising at least one saturated or unsaturated, linear or branched hydrocarbonaceous radical and optionally one or more heteroatom(s) other than Si and existing in the form of a monomeric, oligomeric (linear, cyclic or branched) or polymeric (linear, cyclic or branched) structure, the said hydrocarbonaceous compound containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from the AFs, wherein when the applicational functional group (UF) is different from the AFs, the applicational functional group is a fluorinated alkyl of formula  $R^{19}$ -OH in which  $R^{19}$  is a linear or branched aliphatic radical having 2 to 20 carbon atoms, said carbon atoms being substituted by at least one fluorine atom and optionally by at least one hydrogen atom; or a polyether of formula:  $R^{20}$ -[OCH<sub>2</sub>CH<sub>2</sub>]<sub>v</sub>-[OCH<sub>2</sub>CH(CH<sub>2</sub>)<sub>w</sub>]-OH wherein  $R^{20}$  is a linear or branched alkyl radical having from 1 to 4 carbon atoms and the symbols v and w are other than 0 and range from 5 to 30;

or a mixture of (C-1) and (C-2);

(D) optionally, a nonreactive additive system comprising:

(i) at least one organic solvent/diluent and/or at least one nonreactive organosilicon compound; (2i) and/or water, in the event of a liquid silicone formulation in aqueous dispersion or emulsion; and

(E) optionally, at least one auxiliary agent other than (D);

wherein constituent (A) comprises a mixture (A-3):

of at least one resin containing at least two different siloxyl units selected from among those of formulae  $(R^3)_3SiO_{0.5}$  (M unit),  $(R^3)_2SiO$  (D unit) and  $R^3SiO_{1.5}$  (T unit), at least one of said structural units being a T unit, with the proviso that the OH and/or  $OR^1$  groups ~~may be~~ are borne by the M, D and/or T units and the content by weight of said OH and/or  $OR^1$  groups ranging from 0.2% to 10% by weight, and

of at least one other resin containing at least two different siloxyl units selected from among those of formulae  $(R^3)_3SiO_{0.5}$  (M unit),  $(R^3)_2SiO$  (D unit),  $R^3SiO_{1.5}$  (T unit), and  $SiO_2$  (Q unit), at least one of said structural units being a Q unit, with the proviso that said OH and/or  $OR^1$  groups ~~may be~~ are borne by the M, D and/or T units and the content by weight of said OH and/or  $OR^1$  groups ranging from 0.2% to 10% by weight; and further wherein the  $R^3$  radicals comprising said resins being identical or different and selected from the group consisting of  $C_1$ - $C_6$  alkyl radicals which are linear or branched,  $C_2$ - $C_4$  alkenyl radicals, the phenyl radical and the 3,3,3-trifluoropropyl radical and thence curing said composition.

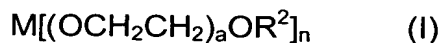
17. (Cancelled)

18. (Currently Amended) A method for the treatment of a textile substrate, comprising directly depositing thereon a silicone composition comprising a formulation of:

(A) at least one polyorganosiloxane (POS) resin containing, per molecule, at least two different siloxyl units selected from among those of M, D, T and Q types, one of said structural units being a T unit or a Q unit, and at least three

hydrolyzable/condensable groups of OH and/or OR<sup>1</sup> types, in which R<sup>1</sup> is a linear or branched C<sub>1</sub> to C<sub>6</sub> alkyl radical;

(B) either (B-1), at least one metal alkoxide of general formula:



in which M is a metal selected from the group consisting of Ti, Zr, Ge, Si, Mn and Al; n = valency of M; the R<sup>2</sup> substituents, which may be identical or different, are each a linear or branched C<sub>1</sub> to C<sub>12</sub> alkyl radical; a represents zero, 1 or 2; with the provisos that, when the symbol a represents zero, the alkyl radical R<sup>2</sup> has from 2 to 12 carbon atoms and, when the symbol a represents 1 or 2, the alkyl radical R<sup>2</sup> has from 1 to 4 carbon atoms;

or (B-2), at least one metal polyalkoxide produced by the partial hydrolysis of the monomeric alkoxides of formula (I) indicated above in which the symbol R<sup>2</sup> is as defined above with the symbol a representing zero;

or a combination of (B-1) and (B-2);

or (B-3) a combination of (B-1) and/or (B-2) with:

(B-3/1), at least one optionally alkoxyated organosilane containing, per molecule, at least one C<sub>2</sub>-C<sub>6</sub> alkenyl group,

and/or (B-3/2), at least one organosilicon compound comprising at least one epoxy, amino, ureido, isocyanato and/or isocyanurate radical;

(C) either (C-1), at least one silane and/or at least one POS which is essentially linear and/or at least one POS resin, each of said organosilicon compounds containing, per molecule, attaching functional group(s) (AF) capable of



reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from said AFs, wherein when the applicational functional group (UF) is different from said AFs, the applicational functional group(s) is a non-salified aminoalkyl, a fluorinated alkyl or a polyether;

or (C-2), at least one hydrocarbonaceous compound comprising at least one saturated or unsaturated, linear or branched hydrocarbonaceous radical and optionally one or more heteroatom(s) other than Si and existing in the form of a monomeric, oligomeric (linear, cyclic or branched) or polymeric (linear, cyclic or branched) structure, the said hydrocarbonaceous compound containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from the AFs, wherein when the applicational functional group (UF) is different from the AFs, the applicational functional group is a fluorinated alkyl of formula  $R^{19}$ -OH in which  $R^{19}$  is a linear or branched aliphatic radical having 2 to 20 carbon atoms, said carbon atoms being substituted by at least one fluorine atom and optionally by at least one hydrogen atom; or a polyether of formula:  $R^{20}$ -[OCH<sub>2</sub>CH<sub>2</sub>]<sub>v</sub>-[OCH<sub>2</sub>CH(CH<sub>2</sub>)<sub>w</sub>]-OH wherein  $R^{20}$  is a linear or branched alkyl radical having from 1 to 4 carbon atoms and the symbols v and w are other than 0 and range from 5 to 30;

or a mixture of (C-1) and (C-2);

(D) optionally, a nonreactive additive system comprising:

(i) at least one organic solvent/diluent and/or at least one nonreactive organosilicon compound; (2i) and/or water, in the event of a liquid silicone formulation in aqueous dispersion or emulsion; and

(E) optionally, at least one auxiliary agent other than (D);

wherein constituent (A) comprises a mixture (A-3):

of at least one resin containing at least two different siloxyl units selected from among those of formulae  $(R^3)_3SiO_{0.5}$  (M unit),  $(R^3)_2SiO$  (D unit) and  $R^3SiO_{1.5}$  (T unit), at least one of said structural units being a T unit, with the proviso that the OH and/or  $OR^1$  groups ~~may be~~ are borne by the M, D and/or T units and the content by weight of said OH and/or  $OR^1$  groups ranging from 0.2% to 10% by weight, and

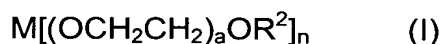
of at least one other resin containing at least two different siloxyl units selected from among those of formulae  $(R^3)_3SiO_{0.5}$  (M unit),  $(R^3)_2SiO$  (D unit),  $R^3SiO_{1.5}$  (T unit), and  $SiO_2$  (Q unit), at least one of said structural units being a Q unit, with the proviso that said OH and/or  $OR^1$  groups ~~may be~~ are borne by the M, D and/or T units and the content by weight of said OH and/or  $OR^1$  groups ranging from 0.2% to 10% by weight; and further wherein the  $R^3$  radicals comprising said resins being identical or different and selected from the group consisting of  $C_1$ - $C_6$  alkyl radicals which are linear or branched,  $C_2$ - $C_4$  alkenyl radicals, the phenyl radical and the 3,3,3-trifluoropropyl radical and thereafter curing said composition.

19. (Currently Amended) A method for the treatment of a textile substrate, comprising coating the individual yarns, fibers and/or filaments of which, at any point

in the preparation, restoration and/or maintenance thereof, with a silicone composition and comprising a formulation of:

(A) at least one polyorganosiloxane (POS) resin containing, per molecule, at least two different siloxyl units selected from among those of M, D, T and Q types, one of said structural units being a T unit or a Q unit, and at least three hydrolyzable/condensable groups of OH and/or OR<sup>1</sup> types, in which R<sup>1</sup> is a linear or branched C<sub>1</sub> to C<sub>6</sub> alkyl radical;

(B) either (B-1), at least one metal alkoxide of general formula:



in which M is a metal selected from the group consisting of Ti, Zr, Ge, Si, Mn and Al; n = valency of M; the R<sup>2</sup> substituents, which may be identical or different, are each a linear or branched C<sub>1</sub> to C<sub>12</sub> alkyl radical; a represents zero, 1 or 2; with the provisos that, when the symbol a represents zero, the alkyl radical R<sup>2</sup> has from 2 to 12 carbon atoms and, when the symbol a represents 1 or 2, the alkyl radical R<sup>2</sup> has from 1 to 4 carbon atoms;

or (B-2), at least one metal polyalkoxide produced by the partial hydrolysis of the monomeric alkoxides of formula (I) indicated above in which the symbol R<sup>2</sup> is as defined above with the symbol a representing zero;

or a combination of (B-1) and (B-2);

or (B-3) a combination of (B-1) and/or (B-2) with:

(B-3/1), at least one optionally alkoxyated organosilane containing, per molecule, at least one C<sub>2</sub>-C<sub>6</sub> alkenyl group,

and/or (B-3/2), at least one organosilicon compound comprising at least one epoxy, amino, ureido, isocyanato and/or isocyanurate radical;

(C) either (C-1), at least one silane and/or at least one POS which is essentially linear and/or at least one POS resin, each of said organosilicon compounds containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from said AFs, wherein when the applicational functional group (UF) is different from said AFs, the applicational functional group(s) is a non-salified aminoalkyl, a fluorinated alkyl or a polyether;

or (C-2), at least one hydrocarbonaceous compound comprising at least one saturated or unsaturated, linear or branched hydrocarbonaceous radical and optionally one or more heteroatom(s) other than Si and existing in the form of a monomeric, oligomeric (linear, cyclic or branched) or polymeric (linear, cyclic or branched) structure, the said hydrocarbonaceous compound containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from the AFs, wherein when the applicational functional group (UF) is different from the AFs, the applicational functional group is a fluorinated alkyl of formula  $R^{19}$ -OH in which  $R^{19}$  is a linear or branched aliphatic radical having 2 to 20 carbon atoms, said carbon atoms being substituted by at least one fluorine atom and optionally by at least one hydrogen atom; or a polyether of formula:  $R^{20}$ -[OCH<sub>2</sub>CH<sub>2</sub>]<sub>v</sub>-

[OCH<sub>2</sub>CH(CH<sub>2</sub>)<sub>w</sub>OH wherein R<sup>20</sup> is a linear or branched alkyl radical having from 1 to 4 carbon atoms and the symbols v and w are other than 0 and range from 5 to 30;

or a mixture of (C-1) and (C-2);

(D) optionally, a nonreactive additive system comprising:

(i) at least one organic solvent/diluent and/or at least one nonreactive organosilicon compound; (2i) and/or water, in the event of a liquid silicone formulation in aqueous dispersion or emulsion; and

(E) optionally, at least one auxiliary agent other than (D);

wherein constituent (A) comprises a mixture (A-3):

of at least one resin containing at least two different siloxyl units selected from among those of formulae (R<sup>3</sup>)<sub>3</sub>SiO<sub>0.5</sub> (M unit), (R<sup>3</sup>)<sub>2</sub>SiO (D unit) and R<sup>3</sup>SiO<sub>1.5</sub> (T unit), at least one of said structural units being a T unit, with the proviso that the OH and/or OR<sup>1</sup> groups ~~may be~~ are borne by the M, D and/or T units and the content by weight of said OH and/or OR<sup>1</sup> groups ranging from 0.2% to 10% by weight, and

of at least one other resin containing at least two different siloxyl units selected from among those of formulae (R<sup>3</sup>)<sub>3</sub>SiO<sub>0.5</sub> (M unit), (R<sup>3</sup>)<sub>2</sub>SiO (D unit), R<sup>3</sup>SiO<sub>1.5</sub> (T unit), and SiO<sub>2</sub> (Q unit), at least one of said structural units being a Q unit, with the proviso that said OH and/or OR<sup>1</sup> groups ~~may be~~ are borne by the M, D and/or T units and the content by weight of said OH and/or OR<sup>1</sup> groups ranging from 0.2% to 10% by weight; and further wherein the R<sup>3</sup> radicals comprising said resins being identical or different and selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl radicals which are linear or branched, C<sub>2</sub>-C<sub>4</sub> alkenyl radicals, the phenyl radical and the 3,3,3-trifluoropropyl radical thereafter curing said composition.